REMARKS

Claims 1-8 and are pending in the application. Claim 1 has been amended so as to recite that the at least part of the second radio frequency signals including the second beacon signal is applied to the first cable run together with the first radio frequency signals (see, for instance, Specification page 6, lines 27-30, and page 7, lines 1-19).

In the Office Action date June 8, 2004, claims 1-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,073,019 to *Lowdon et al.* in view of WIPO Patent application No. WO 98/35511 to *Harjula et al.*, and further in view of U.S. Patent No. 5,913,169 to *Vaara.* This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142, p. 2100-128 (8th ed., Rev. 2 May 2004). Absent such a *prima facie* case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.*

To establish a *prima facie* case of obviousness, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142 at p. 2100-128.

Independent claim 1 currently on file recites a mobile communication system, comprising runs of loss cable disposed in succession along a zone of radio coverage and feeder means for feeding the cable runs from base stations of at least one cellular mobile communication network, wherein the feeder means comprise: means for applying first radio frequency signals from a first base station of the cellular mobile communication network to a first cable run, said first radio frequency signals including a first beacon signal specific to a cell serviced by said first base station; means for applying second radio frequency signals from a second base station of the cellular mobile communication network to a second cable run which is adjacent to the first run, said second radio

frequency signals including a second beacon signal specific to a cell serviced by said second base station; and means for applying to the first cable run together with the first radio frequency signals at least part of the second radio frequency signals including said second beacon signal.

Claim 1 has been amended so as to make it clearer that the first radio frequency signals including said first beacon signal, and at least part of the second radio frequency signals including said second beacon signal, are applied together to the first cable run.

The applicant agrees with the Examiner's interpretation of *Lowdon*. Indeed, *Lowdon* teaches means for applying first radio frequency signals from a first base station to a first cable run, and means for applying second radio frequency signals from a second base station to a second cable run which is adjacent to the first run said second radio frequency signals.

However, as was acknowledged by the Examiner in the present Office Action, *Lowdon* fails to teach (a) that said first radio frequency signals include a first beacon signal specific to a cell serviced by said first base station; (b) that said second radio frequency signals include a second beacon signal specific to a cell serviced by said second base station; and (c) of means for applying to the first cable run at least part of the second radio frequency signals including said second beacon signal.

The Examiner, referring to page 8, paragraph 1 of *Harjula*, considers that *Harjula* teaches means for applying to the first cable run at least part of the second radio frequency signals. Stated otherwise, in the Examiner's view, the above-mentioned feature (c) would be disclosed in *Harjula*. Applicant respectfully traverses this opinion.

Harjula discloses a prior reservation scheme; a particular frequency channel is occupied by the radio-telephone; when a call handover is anticipated, the same frequency channel has already been reserved at the target base station as a standby channel (see page 8, paragraph 1), whereby the transmitter at said base station remains turned off (page 8, paragraph 2, and page 10, last paragraph); when a handover request message is received by the targeted base station, the latter turns its transmitter on, and informs the infrastructure to change the channel unit on the old base station (which had previously serviced the call) to the handover standby state (page 8, paragraph 3); as a result the

transmitter of said old base station is turned off when in standby mode (page 10, last paragraph).

According to *Harjula*, both base stations are not transmitting together in the same frequency channel. This is because the turning on of the target base station's transmitter and the turning off of the old base station's transmitter are controlled concurrently.

To summarize, *Harjula* only teaches using a prior reservation scheme in order to facilitate the call handover. However, the scheme implements an handover stand-by state in the target base station and then in the old base station after the handover has taken place, whereby both base stations are receiving on the same frequency channel at the same time but are not together transmitting on this frequency channel (see page 3, last paragraph, second sentence; and page 4, paragraph 4). Stated otherwise, *Harjula* teaches an overlap of cells in the uplink direction but not in the downlink direction.

On the contrary, the overlap of cells according to claim 1 is obtained in respect of the radio frequency signals transmitted from the respective base stations toward the mobile station, *i.e.*, in the downlink direction (see page 7, first and second paragraphs).

Amendment to claim 1 is aimed at making it clearer that the first radio frequency signals including said first beacon signal, and at least part of the second radio frequency signals including said second beacon signal, are applied together to the first cable run. This feature is neither disclosed nor suggested in the available prior art.

It should further be noted that, as was also acknowledged by the Examiner in the present Office Action, *Lowdon* in view of *Harjula* do not teach [means for applying to the first cable run at least part of the second radio frequency signals] including said second beacon signal.

This feature, in the context of a system comprising runs of loss cable disposed in succession along a zone of radio coverage, allows a mobile station which is currently serviced by the first base station, to pick up the beacon signal of the second base station in order to prepare for the handover. This feature is neither disclosed nor suggested in the available prior art.

The Examiner refers to newly cited reference *Vaara*. Now, *Vaara* relates to the field of conventional cellular mobile communication systems comprising aerial radio

transmitters disposed within a zone a radio coverage so as to form overlapping radio cells. More precisely, *Vaara's* teaching is directed to the GSM system (column 4, lines 17-19). In such a system, a mobile station listens to and measures the respective broadcast control channels (BCCH) of the serving cell and of notified neighboring cells, in order to prepare for handovers. Due to the frequency reuse it is possible that the mobile station receives in some cases two BCCH transmissions from different cells on the same carrier wave frequency (column 4, lines 22-24). This results from the overlapping of the radio cells, and may arise under certain radio transmission conditions.

Nevertheless, the frequency reuse, which is typical of any cellular mobile communications system, does not prevent the beacon signal of each of the base station from being specific. The GSM standard teaches a base station identity code (BSIC) included in each BCCH transmission (see *Vaara*, column 4, lines 19-22). Therefore, the fact that two distinct base stations have BCCH transmission on the same carrier wave frequency does not imply that either one transmits the beacon signal of the other in addition to (and thus together with) its own beacon signal. In that respect, the assertion made by the Examiner in the Office Action that "field, signals and frequencies are all EM waves and thus synonymous with one another") cannot be followed. In the sense of the present invention as well as in the sense of *Vaara*, the beacon signal of a given base station is not limited to its carrier wave frequency. On the contrary, it intrinsically includes determined information which makes it specific to a cell served by a given base station, as recited in Claim 1 and described in the specification (page 5, lines 30-32).

In view of the foregoing, it is respectfully submitted that *Lowdon* in view of *Harjula* and *Vaara* fails to teach or even suggest all the claimed limitations.

In addition, there is no motivation to combine the teachings of *Vaara* with the teachings of *Lowdon* in view of *Harjula*, unless based on applicant's own disclosure. *Vaara* refers to the field of conventional (aerial) cellular mobile communications systems, and not to the art related to systems comprising runs of loss cable disposed in succession along a zone of radio coverage.

The above arguments have shown that there is no *prima facie* case of obviousness established in the present case. As a consequence, the rejection of claims 1-8 under 35 U.S.C. § 103 has been overcome.

For the reasons set out above, early allowance of the application is respectfully solicited. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (MTR.0002US).

Respectfully submitted,

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